

## Lower Paradise Creek Sub-Watershed Potential Restoration Sites

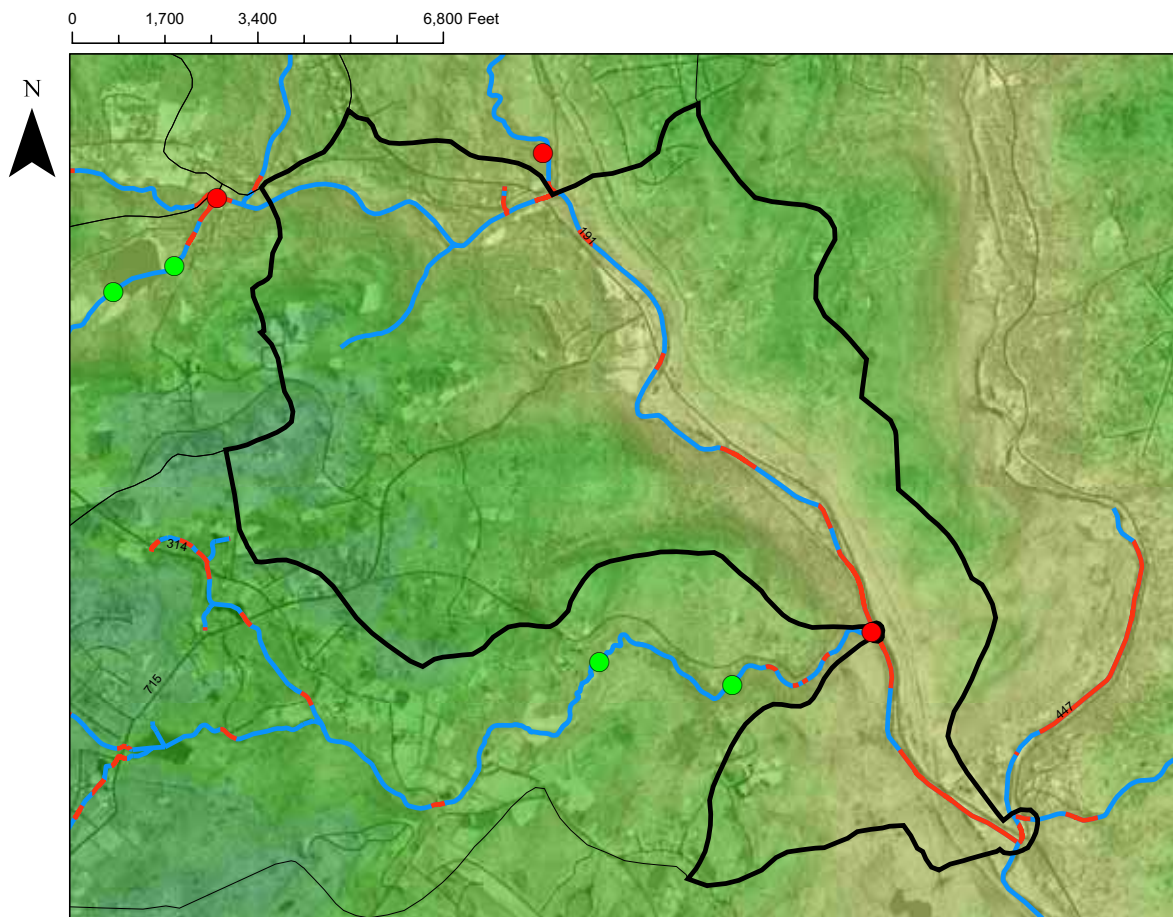


Figure 4 – Potential restoration sites in the Lower Paradise sub-watershed. Sites were identified by means of topographic map examination; stream proximity within 150 feet of roads, bridges and culverts; aerial photo examination and field verification.

### Restoration Projects

Road (1 red)

#### Observation

1. Paradise Creek along Route 191 (4 segments): extensive channelization. Improve habitat within incised channel.

#### Action

Install habitat improvement structures.

## Butz Run Sub-Watershed Potential Restoration Sites

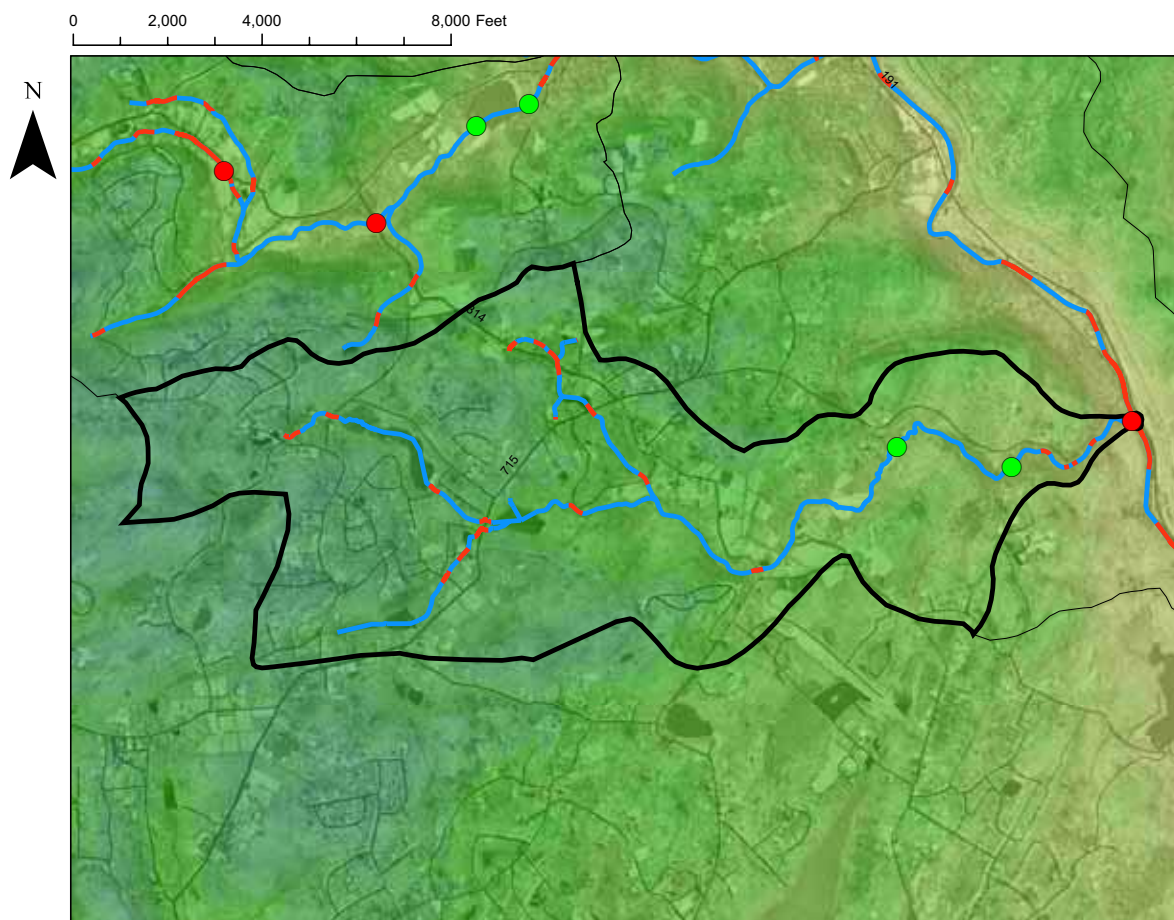


Figure 5 – Potential restoration sites in the Butz Run sub-watershed. Sites were identified by means of topographic map examination; stream proximity within 150 feet of roads, bridges and culverts; aerial photo examination and field verification.

## Restoration Projects

Other (1 green)

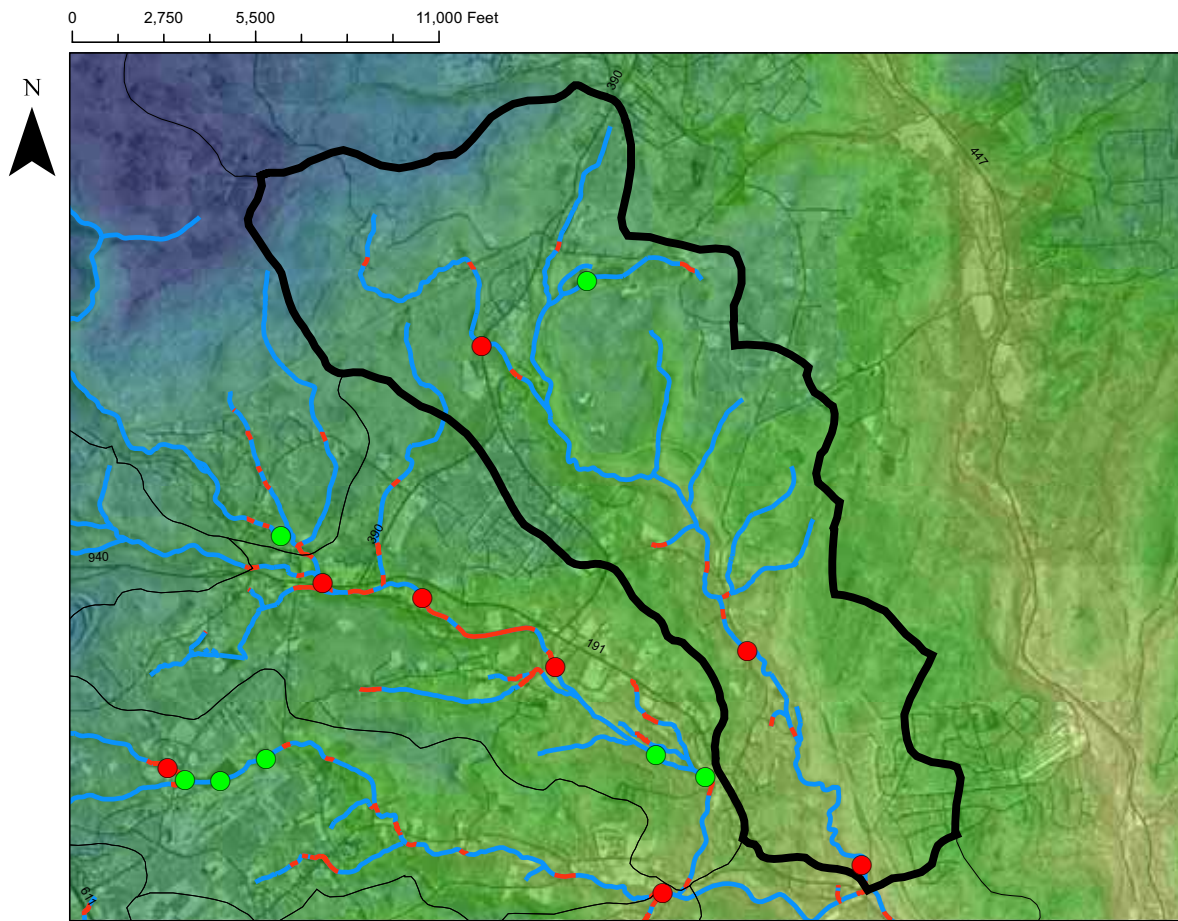
### Observation

1. Butz Run in Parcel 3571 just upstream of forest and abrupt gradient change entering hemlock valley.

### Action

Document reference reach morphology of E channel.

## Cranberry Creek Sub-Watershed Potential Restoration Sites



**Figure 6 – Potential restoration sites in the Cranberry Creek sub-watershed. Sites were identified by means of topographic map examination; stream proximity within 150 feet of roads, bridges and culverts; aerial photo examination and field verification.**

### Restoration Projects

#### Road (3 red)

##### Observation

1. Cranberry Creek at Browns Hill Road crossing – multiple culverts, blockages, undersized.
2. Cranberry Ck at Cranberry Creek Road crossing – culvert effects.
3. Cranberry Ck UNT7 (R) at Route 191 crossing – culvert effects.

##### Action

Road crossing is being renovated (proposed project as of January 2005)  
Crossing frequently floods, culvert undersized. Road runoff is potential problem. Possible project.  
Road runoff should be captured and treated.

#### Other (1 green)

##### Observation

4. Cranberry Ck (L) through parcel 8534 peat mining operation, extreme channelization.

##### Action

See 8534 Aerial Photo. Extensive disturbance of stream channel, mitigation necessary once mining operation is completed.





**Figure 7 - Cranberry Creek at Browns Hill Road: culvert is undersized, threatens road. Culvert should be replaced and sized sufficiently to provide additional cross sectional area and improve fish passage.**



**Figure 8 - Cranberry Creek at Cranberry Creek Road crossing. Culvert undersized, road frequently floods. Stream receives a large amount of road runoff. Non-point source pollution management recommended here.**



**Figure 9 - Cranberry Creek at Route 191 crossing. This location receives a large quantity of road runoff, which should be managed to reduce introduction of pollutants to stream.**



**Figure 10 (left) and Figure 11 (below): headwaters of Cranberry Creek watershed at active peat mining operation. Upon conclusion of peat mining operations, this site will require extensive restoration. Little is presently done to manage water quality impacts at this site.**

